

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of applying at least one agent selected from the group consisting of bioactive materials, flavorants, polymerization initiators, and polymerization rate modifiers to an applicator tip for ~~an-a polymerizable~~ adhesive applicator, comprising:

dissolving or dispersing said agent in a low boiling point solvent to form a solution;

applying said solution to said applicator tip; and
drying said applicator tip;

wherein the low boiling point solvent comprises methanol, and

wherein said applicator tip comprises a porous, absorbent, or adsorbent material.

2. (Original) The method of claim 1, wherein the agent is dissolved in the low boiling point solvent.

3. (Original) The method of claim 1, wherein the agent is selected from the group consisting of polysorbate 20, polysorbate 80, poloxamers, tetrabutylammonium bromide, alkylbenzylalkonium chloride, stannous octoate (tin (II) 2-ethylhexanoate), sodium tetradecyl sulfate, and dodecyldimethyl(3-sulfopropyl)ammonium hydroxide.

4. (Withdrawn) The method of claim 1, wherein the agent is selected from the group consisting of imidazole, tryptamine, urea, arginine, povidine, triphenylphosphine, triethyl phosphite, ethylene glycol, methyl gallate, ascorbic acid, tannins, tannic acid, sodium bisulfite, magnesium hydroxide, calcium sulfate, sodium silicate, thiourea, monensin,

nonactin, crown ethers, calixarenes, polymeric epoxides, diethyl carbonate, di-t-butyl peroxide, and azobisisobutyronitrile.

5. (Original) The method of claim 1, wherein the agent is alkylbenzyldimethylammonium chloride with an alkyl containing 6-18 carbon atoms, its pure components, or mixtures thereof.

6. (Previously Presented) The method of claim 1, wherein the agent comprises at least one member selected from the group consisting of antimicrobials, steroids, anesthetics, antifungal agents, anti-inflammatory agents, antiviral agents, and antitumor agents.

7. (Original) The method of claim 1, wherein the agent comprises crystal violet.

8. (Original) The method of claim 7, wherein said crystal violet is present in an amount sufficient to provide effective antiviral, antimicrobial and/or antifungal properties to a polymerized adhesive composition.

9. (Original) The method of claim 7, wherein said crystal violet is present in an amount sufficient to initiate polymerization of a monomeric adhesive composition without providing effective antiviral, antimicrobial and/or antifungal properties to the adhesive composition subsequent to polymerization.

10. (Original) The method of claim 1, wherein the agent comprises a mixture of (i) at least one member selected from the group consisting of polymerization initiators and polymerization rate modifiers, and (ii) at least one member selected from the group consisting of bioactive materials and flavorants.

11. (Original) The method of claim 1, wherein the agent comprises at least one compound that is both (i) at least one member selected from the group consisting of polymerization initiators and polymerization rate modifiers and (ii) a bioactive material.

12. (Original) The method of claim 11, wherein the agent is selected from the group consisting of antibiotics, antimicrobials, antiseptics, bacteriocins, bacteriostats,

disinfectants, steroids, anesthetics, antifungal agents, anti-inflammatory agents, and antibacterials.

13. (Withdrawn) The method of claim 1, wherein the agent comprises at least one flavorant.

14. (Withdrawn) The method of claim 13, wherein the flavorant is selected from the group consisting of 5-fold orange oil, anethole, banana distillate, benzaldehyde, clove oil, cold pressed valencia orange oil, cold pressed grapefruit oil, cold pressed lemon oil, cold pressed lime oil, cucumber distillate, honey distillate, menthol, alkyl salicylates, monosodium glutamate, spearmint, wintergreen, cinnamon, citrus, cherry, apple, peppermint, peppermint oil, peppermint spirit, vanillin, thymol, ethyl vanillin, and mixtures thereof.

15. (Original) The method of claim 1, wherein said solvent is methanol.

16. (Original) The method of claim 1, wherein said solvent further comprises a low boiling point ketone or alcohol other than methanol.

17. (Original) The method of claim 1, wherein said solvent further comprises acetone.

18. (Original) The method of claim 1, comprising applying said solution to a distal end of the applicator tip and forming a concentration gradient of said agent that decreases from said distal end of the applicator tip towards a center and a proximal end of the applicator tip.

19. (Original) The method of claim 1, wherein said solution is applied to said applicator tip by a process comprising:

combining said solution and said applicator tip in a vessel;

sealing said vessel;

applying one of a vacuum or pressure to said vessel to degas air trapped in said applicator tip; and

releasing said vacuum or pressure.

20. (Original) The method of claim 1, comprising affixing said applicator tip to an applicator tube before or while applying said solution to said applicator tip.

21. (Original) The method of claim 1, wherein said applicator tip comprises a porous polyurethane, polyolefin, polyester, or polyamide.

22. (Original) The method of claim 1, wherein said applicator tip comprises porous polyethylene.

23. (Original) The method of claim 1, wherein said applicator tip comprises polyurethane foam.

24. (Original) The method of claim 21, wherein said applicator tip has an average pore size of about 1 μm to about 500 μm .

25. (Original) An applicator tip made by the method of claim 1.

26. (Withdrawn, Currently Amended) A method of making an applicator for polymerizable adhesives, comprising:

preparing a conduit for a fluid polymerizable adhesive composition operably connected to an applicator tip so that fluid flowing through said conduit also flows through said applicator tip,

wherein an agent is included on or in said applicator tip,

wherein said agent is selected from the group consisting of (a) a bioactive material that is not also a polymerization initiator or a polymerization rate modifier, (b) a bioactive material that is also a polymerization initiator or a polymerization rate modifier, (c) a polymerization initiator that is not also a bioactive material, (d) a polymerization rate modifier that is not also a bioactive material, and (e) a flavorant,

wherein the agent is dissolved or dispersed in a solvent comprising methanol to form a solution, and said solution is applied to said applicator tip, at least when the agent is (b), (c) or (d), and

wherein said applicator tip comprises a porous, absorbent, or adsorbent material.

27. (Withdrawn) The method of claim 26, wherein said bioactive material or flavorant is applied to a pre-formed applicator tip.

28. (Withdrawn) The method of claim 27, wherein said bioactive material or flavorant is applied to the pre-formed applicator tip as a solution of the bioactive material or flavorant in a solvent.

29. (Withdrawn) The method of claim 28, wherein the solvent is subsequently removed by evaporation after the solution is applied to the applicator tip.

30. (Withdrawn) The method of claim 26, wherein said bioactive material or flavorant is introduced into or onto the applicator tip during the process of manufacturing the applicator tip.

31. (Withdrawn) The method of claim 30, wherein the applicator tip is formed by molding a precursor material in a mold.

32. (Withdrawn) The method of claim 31, wherein the bioactive material or flavorant is mixed with the precursor material prior to molding, or is applied as a release agent to the mold.

33. (Canceled)

34. (Withdrawn) The method of claim 26, wherein said applicator tip comprises a fiber or a foam.

35. (Withdrawn) The method of claim 26, wherein said applicator tip has a shape selected from the group consisting of conical, cylindrical, chisel or polygonal.

36. (Withdrawn) The method of claim 26, comprising:
dissolving or dispersing said bioactive material or flavorant in a solvent to
form a solution;
applying said solution to said applicator tip; and
drying said applicator tip.

37. (Withdrawn) The method of claim 36, comprising applying said solution to a
distal end of the applicator tip and forming a concentration gradient of said bioactive material
or flavorant that decreases from said distal end of the applicator tip towards a center and a
proximal end of the applicator tip.

38. (Withdrawn) The method of claim 36, comprising placing said applicator tip
on or in an applicator tube before or while applying said solution to said applicator tip.

39. (Withdrawn) The method of claim 36, comprising placing said applicator tip
on or in an applicator tube after applying said solution to said applicator tip.

40. (Withdrawn, Previously Presented) The method of claim 26, wherein the
bioactive material is present and comprises at least one member selected from the group
consisting of antimicrobials, steroids, anesthetics, antifungal agents, anti-inflammatory
agents, antiviral agents, and antitumor agents.

41. (Withdrawn) The method of claim 26, wherein the bioactive material is
present and comprises crystal violet.

42. (Withdrawn) The method of claim 41, wherein said crystal violet is present in
an amount sufficient to initiate polymerization of a monomeric adhesive composition.

43. (Withdrawn) The method of claim 26, wherein the bioactive material is
present and comprises at least one compound that is both (i) at least one member selected
from the group consisting of polymerization initiators and polymerization rate modifiers and
(ii) bioactive.

44. (Withdrawn) The method of claim 43, wherein said compound is selected from the group consisting of antibiotics, antimicrobials, antiseptics, bacteriocins, bacteriostats, disinfectants, steroids, anesthetics, antifungal agents, anti-inflammatory agents, antiviral agents, antitumor agents, and antibacterials.

45. (Withdrawn) The method of claim 26, wherein the flavorant is present and comprises at least one material selected from the group consisting of fruit oil, vegetable oil, esters, heterocyclic compounds, fruit extract and vegetable extract.

46. (Withdrawn) The method of claim 26, wherein the flavorant is present and comprises at least one material selected from the group consisting of 5-fold orange oil, anethole, banana distillate, benzaldehyde, clove oil, cold pressed valencia orange oil, cold pressed grapefruit oil, cold pressed lemon oil, cold pressed lime oil, cucumber distillate, honey distillate, menthol, alkyl salicylates, monosodium glutamate, spearmint, wintergreen, cinnamon, citrus, cherry, apple, peppermint, peppermint oil, peppermint spirit, vanillin, thymol, and ethyl vanillin.

47. (Withdrawn) The method of claim 26, wherein the flavorant is present and comprises at least one sweetener selected from the group consisting of sugars and sugar substitutes.

48. (Withdrawn) The method of claim 26, wherein the flavorant is present in combination with a delivery substrate for the flavorant.

49. (Withdrawn) The method of claim 48, wherein the delivery substrate is selected from the group consisting of waxes, gels, polyethylene glycol, polysorbate, agar, povidone, sodium stearate, starch, powdered sugar, high fructose corn syrup, fructose, glycerin, hydrogenated glucose syrup, sorbitol, mannitol, sucrose, cellulose acetate phthalate, dextrose, and polyvinyl alcohol.

50. (Currently Amended) A method of applying at least one agent selected from the group consisting of bioactive materials, flavorants, polymerization initiators, and polymerization rate modifiers to an applicator tip for ~~an-a polymerizable~~ adhesive applicator, comprising:

dissolving, dispersing or suspending said agent in a liquid medium to form a suspension or solution;

combining said suspension or solution and said applicator tip in a vessel; sealing said vessel;

applying one of a vacuum or pressure to said vessel to degas air trapped in said applicator tip;

releasing said vacuum or pressure; and
optionally drying said applicator tip.

51. (Original) The method of claim 50, further comprising forcing said applicator tip below a surface of said suspension or solution.

52-75. Canceled)

76. (Withdrawn, Previously Presented) An applicator for a polymerizable adhesive, comprising:

an applicator tip attached to an applicator body, and
at least one agent on or in said applicator tip,
wherein said agent is selected from the group consisting of (a) a bioactive material that is not also a polymerization initiator or a polymerization rate modifier, (b) a bioactive material that is also a polymerization initiator or a polymerization rate modifier, (c) a polymerization initiator that is not also a bioactive material, (d) a polymerization rate modifier that is not also a bioactive material, and (e) a flavorant,

wherein said applicator tip comprises a porous, absorbent, or adsorbent material and the agent is dissolved or dispersed in a solvent comprising methanol to form a solution, and said solution is applied to said applicator tip, at least when the agent is (b), (c) or (d).

77. (Withdrawn) The applicator of claim 76, wherein said applicator body comprises a conduit for a fluid polymerizable adhesive material and said applicator tip is operably connected to said conduit so that fluid flowing through said conduit also flows through said applicator tip.

78. (Withdrawn) The applicator of claim 76, wherein said applicator body is free of a polymerizable adhesive reservoir.

79. (Withdrawn) The applicator of claim 78, wherein said applicator tip comprises a fiber or a foam.

80. (Withdrawn) The applicator of claim 78, wherein said applicator body is a solid structure.

81. (Withdrawn) The applicator of claim 77, wherein the bioactive material is present and is also at least one member selected from the group consisting of polymerization initiators and polymerization rate modifiers.

82. (Withdrawn, Previously Presented) The applicator of claim 77, wherein the bioactive material is present and is selected from the group consisting of antimicrobials, steroids, anesthetics, antifungal agents, anti-inflammatory agents, antiviral agents, antitumor agents, and mixtures thereof.

83. (Withdrawn) The applicator of claim 77, wherein the bioactive material is present and is selected from the group consisting of acetic acid, aluminum acetate, bacitracin, bacitracin zinc, benzalkonium chloride, betadine, calcium chloroplatinate, certrimide, cloramine T, chlorohexidine phosphanilate, chlorohexidine, chlorohexidine sulfate,

chloropenidine, chloroplatinic acid, ciprofloxacin, clindamycin, clioquinol, cysostaphin, gentamicin sulfate, hydrogen peroxide, iodinated polyvidone, iodine, iodophor, minocycline, mupirocin, neomycin, neomycin sulfate, nitrofurazone, non-onynol 9, potassium permanganate, penicillin, polymycin, polymycin B, polymyxin, polymyxin B sulfate, polyvinylpyrrolidone iodine, povidone iodine, 8-hydroxyquinoline, quinolone thioureas, rifampin, rifamycin, silver acetate, silver benzoate, silver carbonate, silver chloride, silver citrate, silver iodide, silver nitrate, silver oxide, silver sulfadiazine, silver sulfate, sodium chloroplatinate, sodium hypochlorite, sodium sulfadiazine, sphingolipids, tetracycline, zinc oxide, and zinc sulfadiazine.

84. (Withdrawn) The applicator of claim 77, wherein the bioactive material is present and comprises crystal violet.

85. (Withdrawn) The applicator of claim 84, wherein said crystal violet is present in an amount sufficient to initiate polymerization of a monomeric adhesive composition.

86. (Withdrawn) The applicator of claim 77, wherein the bioactive material is present and comprises a zinc compound.

87. (Withdrawn) The applicator of claim 86, wherein said zinc compound is selected from the group consisting of zinc salts of cyanoacrylic acid, zinc salts of cyanoacetic acid, zinc salts of dicyanogluutaric acid, zinc salts of rosin, zinc oxide, zinc salts of polycyanoacrylic acid, zinc salts of polyacrylic acid, zinc bacitracin, zinc salicylate, zinc stearate, zinc citrate, zinc lactate, and mixtures thereof.

88. (Withdrawn) The applicator of claim 77, wherein the flavorant is present and comprises at least one material selected from the group consisting of fruit oil, vegetable oil, esters, heterocyclic compounds, fruit extract and vegetable extract.

89. (Withdrawn) The applicator of claim 77, wherein the flavorant is present and comprises at least one material selected from the group consisting of 5-fold orange oil,

anethole, banana distillate, benzaldehyde, clove oil, cold pressed valencia orange oil, cold pressed grapefruit oil, cold pressed lemon oil, cold pressed lime oil, cucumber distillate, honey distillate, menthol, alkyl salicylates, monosodium glutamate, spearmint, wintergreen, cinnamon, citrus, cherry, apple, peppermint, peppermint oil, peppermint spirit, vanillin, thymol, and ethyl vanillin.

90. (Withdrawn) The applicator of claim 77, wherein the flavorant is present and comprises at least one sweetener selected from the group consisting of sugars and sugar substitutes.

91. (Withdrawn) The applicator of claim 77, wherein the flavorant is present in combination with a delivery substrate for the flavorant.

92. (Withdrawn) The applicator of claim 91, wherein the delivery substrate is selected from the group consisting of waxes, gels, polyethylene glycol, polysorbate, agar, povidone, sodium stearate, starch, powdered sugar, high fructose corn syrup, fructose, glycerin, hydrogenated glucose syrup, sorbitol, mannitol, sucrose, cellulose acetate phthalate, dextrose, and polyvinyl alcohol.

93. (Withdrawn) The applicator of claim 77, further comprising a container of polymerizable adhesive physically separated from said applicator tip within said applicator or within a package containing said applicator.

94. (Withdrawn) The applicator of claim 93, wherein said polymerizable adhesive comprises a 1,1-disubstituted ethylene monomer.

95. (Withdrawn) The applicator of claim 94, wherein said monomer is an α -cyanoacrylate.

96. (Withdrawn) The applicator of claim 95, wherein said monomer is selected from the group consisting of butyl and octyl α -cyanoacrylate.

97. (Withdrawn) The applicator of claim 77, wherein said applicator tip comprises a material selected from the group consisting of plastics, foams, rubber, thermosets, films, fibers, and membranes.

98. (Withdrawn) The applicator of claim 97, wherein said material is a foam.

99. (Withdrawn) The applicator of claim 77, wherein said applicator tip comprises a porous, absorbent, or adsorbent material.

100. (Withdrawn) The applicator of claim 99, wherein said material is selected from the group consisting of polyurethane, polyolefin, polyester, and polyamide.

101. (Withdrawn) The applicator of claim 77, wherein the tip is comprised of a reticulated material.

102. (Withdrawn) The applicator of claim 101, wherein the reticulated material comprises a basic agent that initiates polymerization of said adhesive material.

103. (Withdrawn) A method of making a medical adhesive composition comprising:

dispensing a polymerizable adhesive composition with the applicator tip of claim 77,

wherein the polymerizable adhesive composition, upon entering the applicator tip, solubilizes or disperses and mixes with said bioactive material or flavorant, thus producing said medical adhesive composition.

104. (Withdrawn) The method of claim 103, wherein the medical adhesive composition comprises a 1,1-disubstituted ethylene monomer.

105. (Withdrawn) The method of claim 103, wherein the medical adhesive composition comprises an α -cyanoacrylate.

106. (Withdrawn) The method of claim 105, wherein said α -cyanoacrylate is selected from the group consisting of butyl and octyl α -cyanoacrylate.

107. (Withdrawn) The method of claim 103, wherein the medical adhesive composition is dispensed directly from said applicator onto a patient.

108. (Withdrawn) The method of claim 107, wherein the patient is an animal.

109. (Withdrawn) The method of claim 103, wherein the dispensed medical adhesive joins tissues.

110. (Withdrawn) The method of claim 103, wherein the dispensed medical adhesive covers damaged tissue.

111. (Original) A method of making a medical adhesive composition comprising: dispensing a polymerizable adhesive composition through the applicator tip of claim 25,

wherein the polymerizable adhesive composition, upon passing through the applicator tip, solubilizes or disperses and mixes with said at least one agent, thus producing said medical adhesive composition.

112. (Original) The method of claim 111, wherein the medical adhesive composition comprises a 1,1-disubstituted ethylene monomer.

113. (Original) The method of claim 111, wherein the medical adhesive composition comprises an α -cyanoacrylate.

114. (Original) The method of claim 113, wherein said α -cyanoacrylate is selected from the group consisting of butyl and octyl α -cyanoacrylate.

115. (Original) The method of claim 111, wherein the medical adhesive composition is dispensed directly from said applicator onto a patient.

116. (Original) The method of claim 115, wherein the patient is an animal.

117. (Original) The method of claim 111, wherein the medical adhesive composition comprises a bioactive material.

118. (Original) The method of claim 111, wherein the dispensed medical adhesive composition joins tissues.

119. (Original) The method of claim 112, wherein the dispensed medical adhesive composition covers damaged tissue.

120. (Original) An applicator for a polymerizable adhesive, comprising:
a conduit for a fluid polymerizable adhesive material; and
an applicator tip according to claim 25.

121. (Original) The applicator of claim 120, wherein the applicator is sterilized.

122. (Withdrawn) The applicator of claim 77, wherein the applicator is sterilized.

123. (Withdrawn) An applicator for a polymerizable adhesive comprising:
a conduit for a fluid polymerizable adhesive material; and
an applicator tip operably connected to said conduit so that fluid flowing
through said conduit also flows through said applicator tip;
wherein said applicator tip has a gradient of a polymerization initiator or
polymerization rate modifier disposed therein.

124. (Withdrawn) The applicator of claim 123, wherein the gradient shows a
decrease in concentration of the initiator from a distal end of the applicator tip to a proximal
end of the applicator tip.

125. (Withdrawn) A kit comprising a saleable package containing:
a container that contains a polymerizable monomer composition, and
an applicator according to claim 76.

126. (Withdrawn) The kit of claim 125, wherein said bioactive material or
flavorant is a polymerization initiator or polymerization rate accelerator and causes
polymerization of the polymerizable monomer composition to form a polymeric adhesive.

127. (Withdrawn) The kit of claim 125, wherein the polymerizable monomer is a 1,1-disubstituted ethylene monomer.

128. (Withdrawn) The kit of claim 127, wherein the polymerizable monomer is an α -cyanoacrylate.

129. (Withdrawn) The kit of claim 128, wherein the α -cyanoacrylate is selected from the group consisting of butyl and octyl α -cyanoacrylate.

130. (Withdrawn) The kit of claim 125, wherein the bioactive material or flavorant is crystal violet.

131. (Withdrawn) The kit of claim 125, wherein the kit is sterilized.

132. (Withdrawn) The kit of claim 125, wherein the applicator is a swab attached to an applicator handle.

133. (Withdrawn) The kit of claim 125, wherein the container is operably connected for fluid flow from the container into the applicator.

134. (Withdrawn) The kit of claim 125, wherein the container is separate from the applicator.

135. (Withdrawn) An applicator for applying a polymerizable monomeric adhesive composition, comprising:

an applicator body, and

an applicator tip attached to the applicator body,

wherein said applicator body is free of a polymerizable adhesive reservoir, and

wherein at least one agent selected from the group consisting of bioactive materials, flavorants, polymerization initiators, and polymerization rate modifiers is present on or in said applicator tip.

136. (Withdrawn) The applicator of claim 135, wherein said applicator body is a solid structure.

137. (Withdrawn) The applicator of claim 135, wherein the agent comprises at least one member selected from the group consisting of antibiotics, antimicrobials, antiseptics, bacteriocins, bacteriostats, disinfectants, steroids, anesthetics, antifungal agents, anti-inflammatory agents, antiviral agents, antitumor agents, and antibacterials.

138. (Withdrawn) The applicator of claim 135, wherein the agent comprises crystal violet.

139. (Withdrawn) The applicator of claim 138, wherein said crystal violet is present in an amount sufficient to provide effective antiviral, antimicrobial and/or antifungal properties to a polymerized adhesive composition.

140. (Withdrawn) The applicator of claim 138, wherein said crystal violet is present in an amount sufficient to initiate polymerization of the polymerizable monomeric adhesive composition without providing effective antiviral, antimicrobial and/or antifungal properties to the adhesive composition subsequent to polymerization.

141. (Withdrawn) The applicator of claim 135, wherein the agent comprises a mixture of (i) at least one member selected from the group consisting of polymerization initiators and polymerization rate modifiers, and (ii) at least one member selected from the group consisting of bioactive materials and flavorants.

142. (Withdrawn) The applicator of claim 135, wherein the agent comprises at least one compound that is both (i) at least one member selected from the group consisting of polymerization initiators and polymerization rate modifiers and (ii) a bioactive material.

143. (Withdrawn) The applicator of claim 135, wherein the applicator is a swab attached to an applicator handle.

144. (Withdrawn) A kit comprising a saleable package containing:
a container that contains a polymerizable monomer composition, and
an applicator according to claim 135.